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EXAMINER

ESTRADA, ANGEL R

ART UNIT PAPER NUMBER

2831

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

1

Office Action Summary

Application No.

10/732,975

Applicant(s)

TOUSIGNANT ET AL.

Examiner

Angel R. Estrada

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 17-31 and 33-35 is/are rejected.
- 7) ☒ Claim(s) 15, 16 and 32 is/are objected to.
- 8) ☒ Claim(s) 36 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/22/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-35, drawn to cable routing system, classified in class 174, subclass 48.
 - II. Claim 36, drawn to a computer with channel members, classified in class 174, subclass 50.

Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the first and second channels having a cover and a gasket positioned between said channels and said electronic enclosure are not required. The subcombination has separate utility such as cable raceway.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Miachel J. Fogarty on May 26, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-35. Affirmation of this election must be made by applicant in replying to this

Art Unit: 2831

Office action. Claim 36 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Oath/Declaration

2. The Oath is objected because it does not include the signatures of two inventors.

Information Disclosure Statement

3. The information disclosure statement filed on April 22, 2004 has been considered by the Examiner

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "gasket" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 9-14, 17-29 and 33-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Ewer et al (US 6,344,611; hereinafter Ewer).

Regarding claim 1, Ewer discloses a cable routing system (see figures 1 or 4) comprising: a first channel (10, vertical direction) for routing at least one of a plurality of cables (27) in a first direction (see figure 4); a second channel (10, horizontal direction) for routing said at least one cable (27) in a second direction (see figure 1); and a

Art Unit: 2831

plurality of teeth (26) spaced apart from one another and disposed in one of said first channel and said second channel (see figure 4), said teeth (26) positioned to create spaces in-between said plurality of cables (see figure 4) before said at least one cable transitions from said first direction to said second direction (see figure 4).

Regarding claim 2, Ewer discloses the system (see figures 1 and 4) wherein said first channel (10, vertical direction) comprises: a base (16); and a plurality of sides (22) projecting outward from said base (see figure 7).

Regarding claim 3, Ewer discloses the system (see figures 1 and 4) wherein said second channel (10, horizontal direction) comprises: a base (16); and a plurality of sides (22) projecting outward from said base (see figure 7).

Regarding claim 4, Ewer discloses the system (see figures 1 and 4) wherein said first channel (10, vertical direction) and said second channel (10, horizontal direction) are positioned next to each other to create a cable bend area (see figure 4) wherein said bend area is sized to allow said cables to maintain said spaces as said cables (27) transition from said first direction to said second direction (see figure 4).

Regarding claim 5, Ewer discloses the system (see figures 1 and 4) wherein said second channel (10, horizontal direction) further comprises: a cover (18) operating to cover said second channel base (see figure 1).

Regarding claim 6, Ewer discloses the system (see figures 1 and 4) wherein said teeth (26) are located within said second channel (10, horizontal direction) and project outward from said second channel base (see figure 7).

Regarding claim 7, Ewer discloses the system (see figures 1 and 4) wherein said teeth (26) are located in said first channel (10, vertical direction) next to said bend area

(see figure 4) and said teeth project outward from said first channel base (see figure 7 and 4).

Regarding claim 9, Ewer discloses the system (see figures 1 and 4) wherein said first channel (10, vertical direction) further comprises: a cover (18) operative to cover said base (see figure 7).

Regarding claim 10, Ewer discloses the system (see figures 1 and 4) wherein said first channel (10, vertical direction) further comprises: a plurality of covers (18); a plurality of base fastening devices (24) attached to said base (column 3 lines 40-43); a plurality of cover fastening devices attached to said covers (column 3 lines 40-43, see figures 1 and 2); and wherein at least one of said cover fastening devices is operative to secure at least one of said plurality of covers to said base (see figures 1 and 2) by fastening to at least one of said plurality of base fastening devices (column 3 lines 40-43).

Regarding claim 11, Ewer discloses the system (see figures 1 and 4) wherein said plurality of covers (18) comprise one or more of: a clear cover; an opaque cover; a vented cover; and any combination of said clear, opaque, or vented cover (see figures 1 and 2).

Regarding claim 12, Ewer discloses the system (see figures 1 and 4) wherein said plurality of teeth (26) extend diagonally outward from said first channel base (10, vertical direction).

Regarding claim 13, Ewer discloses the system (see figures 1 and 4) wherein said first channel (10, vertical direction) and said second channel (10, horizontal

Art Unit: 2831

direction) are positioned at a right angle with respect to one another thereby creating a right angle bend (see figures 1 and 4).

Regarding claim 14, Ewer discloses the system (see figures 1 and 4) wherein said first channel (10, vertical direction) and said second channel (10, horizontal direction) can be mounted inside of an electronics enclosure (since the channel can be mounted on any supporting surface, such as a wall of an electronic enclosure).

Regarding claim 17, Ewer discloses the system (see figures 1 and 4) wherein said first channel (10, vertical direction) is multisectional (see figure 1).

Regarding claim 18, Ewer discloses the system (see figure 1 and 4) wherein said first channel (10, vertical direction), said second channel (10, horizontal direction), and said teeth (26) are made of galvanized steel (column 4 lines 61-64).

Note: the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation "made of hot dipped has not been given patentable weight.

Regarding claim 19, Ewer discloses a method for routing cables (27) comprising: defining a first channel (10, vertical direction); defining a second channel (10, horizontal direction); disposing a plurality of teeth (26) in one of said first channel and said second channel (see figures 1 and 4), wherein said teeth (26) are spaced apart from one another to create a plurality of cable paths (see figure 7), and running said cables (27) in said first channel, through said cable paths, and into said second channel (see figure 4).

Regarding claim 20, Ewer discloses the method wherein said first channel (10, vertical direction) comprises: a base (16); and a plurality of sides (22, see figure 7).

Regarding claim 21, Ewer discloses the method further comprising: positioning said first channel (10, vertical direction) and said second channel (10, horizontal direction) near one another thereby creating an angle bend for said cables (see figure 4) and a cable bend area (see figure 4) wherein said bend area allows said cables (29) to maintain cable spacing as said cables transition from said first channel to said second channel (see figure 4); and mounting said plurality of teeth (26) in said first channel next to said angle bend (see figure 4).

Regarding claim 22, Ewer discloses the method wherein said running said cables step (see figure 4); comprise running said cables (29) into said first channel (10, vertical direction); assigning each cable of said plurality of cables to at least one cable path of said plurality of cable paths (see figure 4); threading said cables through said assigned cable paths (see figure 4); running said cables from said assigned cable paths into said angle bend (see figure 4); and running said cables from said angle bend into said second channel (see figure 4).

Regarding claim 23, Ewer discloses the method further comprising: disposing a plurality of teeth (26) inside of said second channel (10, horizontal direction), wherein said teeth (26) are spaced apart from one another thereby creating a plurality of second channel cable paths (see figure 7); mounting said plurality of teeth in said second channel near said angle bend (see figure 4); and said running said cables (29) from said angle bend into said second channel step comprises: assigning each cable of said cables (29) in said angle bend to at least one of said plurality of second channel cable paths (see figure 4), and running said cables from said angle bend through said

Art Unit: 2831

assigned second channel cable paths into the remainder of said second channel (see figure 4).

Regarding claim 24, Ewer discloses an apparatus (see figures 1 and 4) for increasing the bend radius of a plurality of cables (29) comprising: a first channel (10, vertical direction) having a base and a plurality of sides (see figure 7), and a second channel (10, horizontal direction) having a base, a plurality of sides (see figure 7), and a plurality of teeth (26) spaced apart from one another operating to create spaces in-between said plurality of cables (see figure 7) wherein said first channel and said second channel are positioned to create a cable bend area (see figure 4) wherein said bend area is sized to allow said cables to maintain said spaces as said cables transition from said first channel to said second channel (see figure 4).

Regarding claim 25, Ewer discloses the apparatus (see figures 1 and 4) wherein said first channel (10, vertical direction) is mounted in an orientation that is vertical with respect to said second channel (10, horizontal direction) so that a right angle is formed between said first channel and said second channel (see figure 4).

Regarding claim 26, Ewer discloses the apparatus (see figures 1 and 4) wherein said teeth (26) are mounted next to said cable bend area (see figure 4).

Regarding claim 27, Ewer discloses the apparatus (see figures 1 and 4) wherein said first channel (10, vertical direction) further comprises: at least one cover (18); a plurality of base fastening devices (24) attached to said base (column 3 lines 40-43); and a plurality of cover fastening devices (column 3 lines 40-43) attached to said cover wherein said plurality of cover fastening devices operate to secure said cover to said base by fastening to said plurality of base fastening devices (column 3 lines 40-43).

Regarding claim 28, Ewer discloses the apparatus (see figures 1 and 4) wherein said first channel (10, vertical direction) further comprises: a plurality of teeth (26) mounted inside of said first channel spaced apart from one another projecting outward from said first channel base (see figure 7) wherein said teeth (26) are operative to space said cables apart as said cables run through said first channel (see figure 4).

Regarding claim 29, Ewer discloses the apparatus (see figures 1 and 4) wherein said second channel (10, horizontal direction) further comprises: at least one cover (18); a plurality of second channel base fastening devices (24) attached to said second channel base (column 3 lines 40-43); and a plurality of cover fastening devices (column 3 lines 40-43) attached to said cover (see figure 1) wherein said cover fastening devices operate to secure said cover (18) to said second channel base (10, horizontal direction) by fastening to said second channel base fastening devices (see figure 1).

Regarding claim 33, Ewer discloses a mechanism for routing a plurality of cables (see figures 1 and 4), said mechanism comprising: means (10, vertical direction) for routing said cables (27) in a first direction (see figure 1), means (10, horizontal direction) for routing said cables (27) in a second direction, means (26) for increasing a bend radius of said plurality of cables while transitioning from said first direction routing means to said second direction routing means (see figure 4).

Regarding claim 34, Ewer discloses the mechanism (see figures 1 and 4) further comprising: means (18) for covering cables routed in said first direction routing means (10, vertical direction); and means (24) for securing said covering means to said first direction routing means (see figure 1).

Regarding claim 35, Ewer discloses the mechanism (see figures 1 and 4) further comprising: means (18) for covering cables routed in said second direction routing means (10, horizontal direction); means (24) for securing said covering means to said second direction routing means (see figure 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al (US 6,444,903, hereinafter Saeki) in view of Hodge (US 5,146,532)

Regarding claim 1, Saeki discloses a cable routing system (see figure 5) comprising: a first channel (10) for routing at least one of a plurality of cables (2) in a

Art Unit: 2831

first direction (see figure 5); a second channel (14) for routing said at least one cable (2) in a second direction (see figure 5); but Saeki lacks a plurality of teeth spaced apart from one another and disposed in one of said first channel and said second channel. Hodges teaches a plurality of teeth (58) being positioned on a mounting surface (see figure 1), said teeth (58) positioned to create spaces in-between said plurality of cables (see figure 1) before said at least one cable transitions from a first direction to said second direction (see figure 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make Saeki's with a plurality of teeth spaced apart from one another as taught by Hodges to positively locate and retain one or more cables while providing strain relief.

Regarding claim 2, Saeki discloses the system (see figure 5) wherein said first channel (10) comprises: a base (7); and a plurality of sides (8,9) projecting outward from said base (see figure 5).

Regarding claim 3, Saeki discloses the system (see figure 5) wherein said second channel (14) comprises: a base (11); and a plurality of sides (12,13) projecting outward from said base (see figure 5).

Regarding claim 4, Saeki discloses the system (see figure 5) wherein said first channel (10) and said second channel (14) are positioned next to each other to create a cable bend area (see figure 5) wherein said bend area is sized to allow said cables (2) to maintain said spaces as said cables (2) transition from said first direction to said second direction (see figure 5).

Regarding claim 5, Saeki discloses the system (see figure 5) wherein said second channel (14) further comprises: a cover (23) operating to cover said second channel base (see figure 5).

Regarding claim 6, the modified Saeki discloses the system (see figure 5) wherein said teeth (58 of Hodges) are located within said second channel (14) and project outward from said second channel base (see figure 1).

Regarding claim 7, the modified Saeki discloses the system (see figure 5) wherein said teeth (58 of Hodges) are located in said first channel (10) next to said bend area (see figure 5) and said teeth (58 of Hodges) project outward from said first channel base (see figure 5).

Regarding claim 8, the modified Saeki discloses the system (see figure 5) wherein said teeth (58 of Hodges) are mounted to a teeth base (10 of Hodges) wherein said teeth base (10 of Hodges) is mounted to said first channel base (see figure 5).

6. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ewer et al (US 6,344,611; hereinafter Ewer).

Regarding claim 30, Ewer discloses the claimed invention except for at least one of said plurality of teeth is shaped differently from the remaining plurality of teeth. It would have been an obvious matter of design choice to make at least one of said plurality of teeth's shape differently from the remaining plurality of teeth, since such a modification would have involved a mere change in the shape of a component. Where the instant specification and evidence of record fail to attribute any significance (novel or unexpected results) to a particular shape, a change of shape is generally recognized as

being within the level of ordinary skill in the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Regarding claim 31, Ewer discloses the claimed invention except for at least one of said plurality of teeth is sized differently from the remaining plurality of teeth. It would have been an obvious matter of design choice to make at least one of said plurality of teeth's size differently from the remaining plurality of teeth, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

Allowable Subject Matter

7. Claims 15, 16 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The primary reasons for the indication of the allowability of claims 15, 16 and 32 are:

Regarding claims 15 and 16, the prior art does not teach or fairly suggest in combination with the other claimed limitations a gasket positioned between said channels and said electronics enclosure wherein said gasket is comprised of a material that is compatible with electromagnetic interference specifications of said electronics enclosure.

Regarding claim 32, the prior art does not teach or fairly suggest in combination with the other claimed limitations a gasket positioned in-between said channels and said

Art Unit: 2831

computer enclosure wherein said gasket is made of a material that operates to minimize electromagnetic interference.

These limitations were found in claims 15, 16 and 32, and are neither disclosed nor taught by the prior art of record, alone or in combination.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McGrath et al (US 6,884,942), Witte (US 5,093,887), Nobel et al (US 6,215,064), Caveney et al (US 5,469,893), Vargas et al (US 5,917,982), Lavoie (US 6,850,687), Szilagvi et al (US 6,751,392) and Benito-Navazo (US 6,156,977) disclose a cable management system.

9. Any inquiry concerning this communication should be directed to Angel R. Estrada at telephone number (571) 272-1973. The Examiner can normally be reached on Monday-Friday (8:30 -5:00).

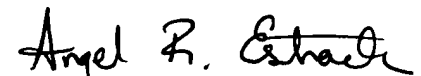
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 Ext: 31. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Art Unit: 2831

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 26, 2005



Angel R. Estrada
Patent Examiner
Unit: 2831